

INTEGRATED PHOTODEVICE AND WAVEGUIDE

ABSTRACT

A waveguide including a waveguide core having a top
5 surface that defines an angle. A waveguide can include a
waveguide core offset from a substrate by a cladding layer.
A phototransistor includes an emitter, a collector, and a
base in lateral alignment. A photodiode includes n- and p-
type regions and an intrinsic substrate portion in lateral
10 alignment. A waveguide includes a waveguide core, an
attenuating layer, and a detector layer. A method for
fabricating a device includes forming a cladding layer over
a substrate having a detector layer formed thereon; forming
an opening in the cladding layer to expose the detector
15 layer; forming a waveguide layer over the cladding layer
and the opening; removing a portion of the waveguide layer
to define a waveguide core; and implanting first and second
regions into the detector layer proximate the waveguide
core.

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